

AY  
cont

selective etching operations to eliminate the oxide formed each time.--

✓

Please replace the paragraph beginning on page 13, line 5, beginning "The surface of the silicon oxide surface layer...", with the following rewritten paragraph:

AS

--The surface of the silicon oxide surface layer 12b covering the silicon block 20b is brought into contact and is glued onto the silicon layer 22a by molecular bonding, the thickness of the silicon layer 22a having been adjusted before this operation.--

✓

IN THE CLAIMS:

Please amend claims 1, 4, 6, 9 and 14 to read as follows:

- AY
- 1 1. (Amended) Process for the formation of a silicon layer (22a, 22b, 32, 34) for  
2 optical purposes with a determined (optical) thickness, on a support (10), characterized  
3 in that it comprises the following steps:  
4 a) Molecular bonding of a silicon block (20a, 20b) on the support on which  
5 there may or may not already be other layers, the silicon block having a surface layer  
6 (22a, 22b, 32, 34) delimited by a cleavage area (21) substantially parallel to its surface,  
7 and with a thickness greater than or respectively less than the said determined thickness,  
8 and the silicon block being covered by a silicon oxide layer (12a, 12b) brought into  
9 contact with the support during bonding,  
10 b) cleavage of the silicon block along the cleavage area to detach the surface  
11 layer fixed to the support from it,  
12 c) thinning or respectively thickening the said surface layer until a thickness  
13 substantially equal to the said determined thickness, is obtained.

A7  
1 4. (Amended) Process according to claim 1, in which a hydrogen implantation  
2 is performed before step a) through one of the faces (23) of the silicon block to form an  
3 embrittled area (21) in the block (20a, 20b), said embrittled area extending substantially  
4 along a plan parallel to the surface of said block and forming the cleavage area, the  
5 implantation energy being adjusted to form the cleavage area at a depth which is greater  
6 than or respectively less than the determined thickness.

A8  
1 6. (Amended) Process according to claim 5, in which the silicon oxide layer is  
2 formed by a chemical vapor deposition method or by thermal oxidation of silicon.

A9  
1 9. (Amended) Process according to claim 7, comprising the formation of said  
2 second mirror by deposition of a metallic layer on the cavity.

A10  
1 14. (Amended) Process according to claim 12, in which the optical thickness of  
2 the silicon layer (32) is equal to  $\frac{\lambda}{4n_s}$ , where  $\lambda$  is the working wavelength of the  
3 optical structure and  $n_s$  is the refraction index of the silicon.